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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/581,604	06/15/2000	HIROKAZU TANAKA	1217-001125	9815

7590

10/03/2002

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EXAMINER

AHMED, SHEEBA

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 10/03/2002

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/581,604

Applicant(s)

TANAKA ET AL.

Examiner

Sheeba Ahmed

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 21, 2002 has been entered.

Claims 1-14 are now pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kayanoki (US 5,963,373) in view of Terasse et al. (US 6,077,341).

Kayanoki disclose a plastic lens comprising a plastic lens substrate (***equivalent to the substrate of the claimed invention***) and a hard coating applied thereon. The hard coating (***equivalent to the coating liquid and the hard coat film of the claimed invention***) comprises fine particles of a composite oxide (***equivalent to the composit***

metal oxide particles of the claimed invention) having an average particle diameter in the range of from 1 to 100 nm (**thus meeting the particle size limitations**) and an epoxy group containing silicon compound (**equivalent to the matrix-forming component of the claimed invention**). The composite oxide is preferably composed of iron oxide, titanium oxide and a silica component. The weight ratio of the iron oxide to the titanium oxide is in the range of 0.005 to 1.0 and the weight ratio of silica to the sum of the iron oxide and titanium oxide is in the range of 0.001 to 1.0. The fine particles are surface treated with an organosilicon compound (**thus meeting the limitations of claims 3 and 6**) (Column 7, lines 25-67 and Column 9, lines 28-30). The hard coating may be provided with a mono-layered or multi-layered anti-reflection film (**thus meeting the limitations of claims 5 and 10-12**) (Column 11, lines 38-43).

Kayanoki does not specifically disclose that the weight ratio of the iron oxide to the titanium oxide may be 0.0005 to less than 0.005 or 0.001 to 0.0045 as recited in dependent claims 13 and 14.

However, Terasa et al. disclose silica-metal oxide particulate composites (Column 1, lines 6-10) wherein the metal oxide particulates are titanium oxide and ferrous or ferric oxide (Column 2, lines 53-58) and may be used in combination (Column 3, lines 7-11). Terasa et al. further teach that the specific metal oxide and the amount of the specific metal oxides are selected depending on the particular purpose of the composite material. For example, UV shielding function can be imparted to the composite material by varying the amount of titanium oxide, zinc oxide and iron oxide: See Column 2, lines 53-67 and Column 3, lines 40-67).

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Accordingly, it would have been obvious to one having ordinary skill in the art to have determined the optimum weight ratio of the iron oxide to the titanium oxide given that the blend ratio of the iron oxide and the titanium oxide may be varied to obtain shielding within a specific wavelength region, i.e., UV region vs. visible light region as taught by Terasse et al.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheeba Ahmed whose telephone number is (703)305-0594. The examiner can normally be reached on Mon-Fri 8am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703)308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-5408 for regular communications and (703)305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-5665.



Sheeba Ahmed
September 30, 2002



Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700